

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

To:

see form PCT/ISA/220

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/GB2005/000878

International filing date (day/month/year)  
08.03.2005

Priority date (day/month/year)  
08.03.2004

International Patent Classification (IPC) or both national classification and IPC  
A24D3/16, A24D3/02

Applicant  
ACETATE PRODUCTS LTD

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/GB2005/000878

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/GB2005/000878

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

|                               |             |                                  |
|-------------------------------|-------------|----------------------------------|
| Novelty (N)                   | Yes: Claims | 2,3,10,15-17,19-22,24,28-30      |
|                               | No: Claims  | 1,4-9,11-14,18,23,25,26,27,31-36 |
| Inventive step (IS)           | Yes: Claims |                                  |
|                               | No: Claims  | 1-36                             |
| Industrial applicability (IA) | Yes: Claims | 1-36                             |
|                               | No: Claims  |                                  |

**2. Citations and explanations**

**see separate sheet**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)

International application No.

PCT/GB2005/000878

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1 ..... GB 896 599  
D2 ..... US 3 043 736  
D3 ..... US 3 413 982  
D4 ..... GB 1 073 896  
D5 ..... US 3 837 264

1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1,4-9,11-14,18,23,25,26,27,31-36 is not new in the sense of Article 33(2) PCT.

1.1 The document D1 discloses a method for manufacturing a tobacco smoke filter comprising porous particles having adsorbent surfaces (e.g. calcium carbonate), in which the particles are applied by spraying with an emulsion comprising water. The process includes a further heating step wherein water is evaporated (see example 5). It is hence considered that the particles of calcium carbonate present in the emulsion are pretreated with a material capable of generating a gaseous emission from the particles. The subject-matter of claims 1,4-7,18,23,25,26,31,32 is therefore not novel having regard to D1.

1.2 The document D2 (see example IV) discloses a similar process, in which a tow of cellulose acetate is sprayed with a liquid mixture comprising a polyvinyl acetate emulsion, water and active carbon, water soluble adhesive can be used instead of polyvinyl acetate (see col.4, lines 15-27). Active carbon is therefore "pretreated" with a liquid (water) before application to the banded tow, a subsequent heating step (100°C, 30 minutes) will remove water and thus generate gaseous emission from the particles.

In view of D2, the subject-matter of claims 1,4-9,11-14,18,26,31,32 is not new.

1.3 The subject-matter of claim 27 (see also point 1 above) cannot be considered as novel in view of document D3 (see col. 4, lines 9-27). D3 teaches a process for applying particles of active carbon to the surface of cellulose acetate fibres in which **"the major part** (hence more than 20%) of the surface area of the carbon particles is available to react or absorb certain gases which contacts its surface". The particles are only defined by their ratio of surface area available for adsorption of cigarette smoke constituent. The process related features of the particles do not appear to confer them distinguishable properties over the particles known from D3.

1.4 The document D4 (example 1 and page 4, lines 34-80; claims) discloses a filter element made of cellulose acetate tow comprising high surface area active carbon particles (1200 m<sup>2</sup>/g) adhesively attached thereto. The particles are only defined by their surface area, the process related features of the particles do not appear to confer them distinguishable properties over the particles known from D4.

The subject matter of claim 33 is therefore known from D4.

1.5 The document D5 (see claim 13, figure 4, col. 3, line 55 - col. 5, line 9) describes an applicator comprising all the technical features of present claim 34. The applicator comprises a tubular body (34) and a plurality of holes (43) and may comprise a metering pump when the particles are introduced with a liquid or slurry (first paragraph of column 5). The rate of introduction of the additive is coordinated with the speed of travel of the tow.

2. In the other dependent claims, slight constructional changes (e.g. selection of specific particle size, surface area, adhesive or filament shape) are defined which come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of claim 2,3,10,15-17,19-22,24,28-30 lacks an inventive step in the sense of Article 33(3) PCT.